

NUECES COUNTY MULTI-PURPOSE TRAINING AREA
5TH FLOOR RENOVATIONS

SECTION 09260

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal stud wall framing.
- B. Gypsum wallboard.
- C. Joint treatment and accessories.
- D. Textured finish system.

1.02 RELATED REQUIREMENTS

- A. Section 06100 - Rough Carpentry: Wood blocking product and execution requirements, including fasteners and anchors permitted.

1.03 REFERENCE STANDARDS

- A. AISI SG02-1 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2001 with 2004 supplement. (replaced SG-971)
- B. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2007.
- C. ASTM C 475/C 475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2002 (Reapproved 2007).
- D. ASTM C 645 - Standard Specification for Nonstructural Steel Framing Members; 2007.
- E. ASTM C 754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2007.
- F. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board; 2007.
- G. ASTM C 954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2007.
- H. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2007.
- I. ASTM C 1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2005.
- J. ASTM C 1396/C 1396M - Standard Specification for Gypsum Board; 2006a.
- K. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction; 2005.
- L. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2007.

1.04 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- C. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

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- D. Samples: Submit texture finish sample boards; minimum 3 textures as requested for initial selection.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum five years of documented experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C 840 and GA-216.
1. See PART 3 for finishing requirements.

2.02 METAL FRAMING MATERIALS

- A. Manufacturers - Metal Framing, Connectors, and Accessories:
1. Clark Western Building Systems: www.clarkwestern.com.
2. Dietrich Metal Framing: www.dietrichindustries.com.
3. Substitutions: See Section 01600 - Product Requirements.
- B. Non-Loadbearing Framing System Components: ASTM C 645; galvanized sheet steel, of size and properties necessary to comply with ASTM C 754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.
1. Exception: The minimum metal thickness and section properties requirements of ASTM C 645 are waived provided steel of 40 ksi minimum yield strength is used, the metal is continuously dimpled, the effective thickness is at least twice the base metal thickness, and maximum stud heights are determined by testing in accordance with ASTM E 72 using assemblies specified by ASTM C 754.
a. Acceptable Products:
1) Dietrich Metal Framing; UltraSteel (tm): www.dietrichindustries.com.
2) Clark Western Building Systems; UltraSteel (tm): www.clarkwestern.com.
2. Studs: "C" shaped with flat or formed webs with knurled faces; 25 gage.
3. Runners: U shaped, sized to match studs.
- C. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI North American Specification for the Design of Cold-Formed Steel Structural Members.
2. Material: ASTM A 653/A 653M steel sheet, SS Grade 50/340, with G60/Z180 hot dipped galvanized coating.

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
1. American Gypsum: www.americangypsum.com.
2. CertainTeed Corporation: www.certainteed.com.
3. Georgia-Pacific Gypsum LLC: www.gp.com/gypsum.
4. National Gypsum Company: www.nationalgypsum.com.
5. Temple-Inland Inc: www.templeinland.com.
6. USG Corporation: www.usg.com.
7. Substitutions: See Section 01600 - Product Requirements.
- B. Wallboard: Paper-faced gypsum wallboard as defined in ASTM C 1396/C 1396M; sizes to minimize joints in place; ends square cut.
1. Application: Use for vertical surfaces, unless otherwise indicated.
2. At Assemblies Indicated with Fire-Rating: Use type required by a tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.

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3. Thickness: 5/8 inch.
4. Mold-Resistant Paper-Faced Products:
 - a. American Gypsum; M-Bloc.
 - b. CertainTeed Corporation; ProRoc Brand Moisture & Mold Resistant Gypsum Board.
 - c. National Gypsum Company; Gold Bond Brand XP Gypsum Board.
 - d. National Gypsum Company; Gold Bond Hi-Abuse Brand XP Wallboard.
 - e. Temple-Inland Inc; ComfortGuard.
 - f. USG Corporation; Sheetrock Brand Mold Tough Gypsum Panels.
 - g. USG Corporation; Sheetrock Brand Mold Tough Gypsum Panels AR.
 - h. Substitutions: See Section 01600 - Product Requirements.

2.04 ACCESSORIES

- A. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.
- B. Finishing Accessories: ASTM C 1047, galvanized steel, unless otherwise indicated.
 1. Types: As detailed or required for finished appearance.
 2. Special Shapes: In addition to conventional cornerbead, provide U-bead at exposed panel edges.
 3. Edge Trim: Type LC bead.
 4. Manufacturers - Finishing Accessories:
 - a. Same manufacturer as framing materials.
 - b. Phillips Manufacturing Co: www.phillipsmfg.com.
 - c. Substitutions: See Section 01600 - Product Requirements.
- C. Joint Materials: ASTM C 475 and as recommended by gypsum board manufacturer for project conditions.
 1. Tape: 2 inch wide, coated glass fiber tape.
 2. Ready-mixed vinyl-based joint compound.
- D. Textured Finish Materials: Latex-based compound; plain.
- E. Screws for Attachment to Steel Members Less Than 0.03 inch In Thickness, to Wood Members, and to Gypsum Board: ASTM C 1002; self-piercing tapping type; cadmium-plated for exterior locations.
- F. Screws for Attachment to Steel Members From 0.033 to 0.112 inch in Thickness: ASTM C 954; steel drill screws for application of gypsum board to loadbearing steel studs.
- G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place. Refer to Section 06100, fasteners and anchors for additional requirements.
- H. Safing Insulation: ASTM E 136, unfaced, 4 inch thick, mineral wool, Owens Corning Safing Insulation/MW.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C 754 and manufacturer's instructions.
- B. Studs: Space studs at 16 inches on center.
 1. Extend partition framing to structure where indicated and to ceiling in other locations.
 2. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.

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- C. Openings: Reinforce openings as required for weight of doors, using not less than double studs at jambs.
- D. Blocking: Install wood blocking for support of:
 - 1. Framed openings.
 - 2. Wall mounted cabinets.
 - 3. Plumbing fixtures.
 - 4. Toilet accessories.
 - 5. Wall mounted door hardware.

3.03 BOARD INSTALLATION

- A. Comply with ASTM C 840 and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Installation on Metal Framing: Use screws for attachment of all gypsum board.

3.04 INSTALLATION OF TRIM AND ACCESSORIES

- A. Corner Beads: Install at external corners, using longest practical lengths.
- B. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.05 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C 840, as follows:
 - 1. Level 4: Walls and ceilings to receive paint finish, unless otherwise indicated.
 - 2. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.
 - a. Wall surfaces to receive wallcovering shall be coated smooth without telegraphing substrate installation and preparation work. Correct wall defects for smooth wallcovering installation.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
- C. GA-214 Summaries:
 - 1. Level 1: All joints and interior angles shall have tape set in joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable.
 - 2. Level 4: All joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over interior angles. Fastener heads and accessories shall be covered with three separate coats of joint compound. All joint compound shall be smooth and free of tool marks and ridges. Note: It is recommended that the prepared surface be coated with a drywall primer prior to the application of final finishes. See painting specification in this regard.

3.06 TEXTURE FINISH

- A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample.

3.07 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

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SECTION 09511

SUSPENDED ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system; non-rated systems; matching existing system.
- B. Acoustical units.

1.02 RELATED REQUIREMENTS

- A. Section 15850 - Air Outlets and Inlets: Air diffusion devices in ceiling.
- B. Section 16000 - Electrical Specifications: Light fixtures in ceiling system.

1.03 REFERENCE STANDARDS

- A. ASTM C 635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2004.
- B. ASTM C 636/C 636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2006.
- C. ASTM E 1264 - Standard Classification for Acoustical Ceiling Products; 1998 (Reapproved 2005).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until dust generating activities have terminated, and overhead work is completed, tested, and approved.

1.05 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Manufacturer's Installation Instructions: Indicate perimeter conditions requiring special attention.

1.06 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years documented experience.

1.07 FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 50 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

- A. Manufacturers:
 - 1. Armstrong World Industries, Inc: www.armstrong.com.
 - 2. Substitutions: See Section 01600 - Product Requirements.
- B. Acoustical Units - General: ASTM E 1264, Class A.

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- C. Acoustical Panels: Painted mineral fiber, with the following characteristics:
 - 1. Size: 12 x 12 inches.
 - 2. Thickness: 3/4 inches.
 - 3. Composition: Mineral.
 - 4. Edge: Beveled.
 - 5. Surface Color: White.
 - 6. Surface Pattern: Non-directional fissured.
 - 7. Product: Fine Fissured No. 592 by Armstrong; matching existing ceiling.

2.02 SUSPENSION SYSTEM(S)

- A. Manufacturers:
 - 1. Armstrong World Industries, Inc: www.armstrong.com.
 - 2. Substitutions: See Section 01600 - Product Requirements.
- B. Suspension Systems - General: ASTM C 635; die cut and interlocking components, with stabilizer bars, clips, splices, and perimeter concealed moldings, and accessories as required.
- C. Concealed Steel Suspension System: Formed galvanized steel, commercial quality cold rolled; intermediate-duty.
 - 1. Profile: Tee; 15/16 inch wide face; 1-11/16 inch high main beam and 1-1/2 inch high cross tee.
 - 2. Accessories: Manufacturer's full line of accessories; stabilizer bars, breather spline, access hook, spring border clip, access clip.
 - 3. Finish: White painted.
 - 4. Product: Armstrong Prelude Concealed Tee System.

2.03 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
- C. Touch-up Paint: Type and color to match acoustical and grid units.
- D. Tack Markers: White steel tacks for location markers.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C 636/C 636M and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Locate system on room axis according to reflected ceiling plan.
- D. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- E. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

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- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- I. Do not eccentrically load system or induce rotation of runners.
- J. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 - 1. Use longest practical lengths.
 - 2. Miter corners.

3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install units after above-ceiling work is complete.
- E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- F. Cutting Acoustical Units:
 - 1. Cut to fit irregular grid and perimeter edge trim.
 - 2. Make field cut edges of same profile as factory edges.
 - 3. Double cut and field paint exposed reveal edges.
- G. Provide upward access tiles below equipment requiring access and at a minimum one access tile for each 40 square feet of ceiling area.
- H. Provide one tack marker at each access tile.

3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

3.05 SCHEDULE

- A. Refer to Room Finish Schedule in Drawings and Drawing notes.

END OF SECTION

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SECTION 09685

CARPET TILE

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes carpet tile, fully adhered; and accessories.
 - 1. Salvage and store existing 24 x 24 carpet tile for reinstallation as scheduled.

1.02 REFERENCES

- A. Carpet and Rug Institute:
 - 1. CRI 104 - Standard for Installation of Commercial Carpet.
- B. Consumer Products Safety Commission:
 - 1. CPSC 16 CFR 1630 - Standard for the Surface Flammability of Carpets and Rugs.
- C. National Fire Protection Association:
 - 1. NFPA 253 - Standard Method of Test for Critical Radiant Flux for Floor Covering Systems Using a Radiant Heat Energy Source.

1.03 SUBMITTALS

- A. Follow Section 01300 for submittal procedures.
- B. *Product Data*: Submit data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- C. *Samples*:
 - 1. Submit two carpet tiles illustrating color and pattern design for carpet color. Verification with Owner.
- D. *Manufacturer's Installation Instructions*: Submit special procedures, and perimeter conditions requiring special attention.

1.04 CLOSEOUT SUBMITTALS

- A. Follow Section 01700 - Execution Requirements: Closeout procedures.
- B. *Operation and Maintenance Data*: Submit maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

1.05 QUALIFICATIONS

- A. *Installer*: Company specializing in performing work of this section with minimum five years documented experience.

1.06 PRE-INSTALLATION MEETING

- A. Follow Section 01700 - Execution Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.
- C. Determination of carpet tile pile direction to be confirmed at this time.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Follow Section 01600 - Product Requirements.
- B. Store materials in area of installation for 48 hours prior to installation.

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PART 2 PRODUCTS

2.01 CARPET TILE

- A. Acceptable Manufacturers:
 - 1. Shaw Contract Group.
 - 2. Substitutions: Follow Section 01600.

2.02 COMPONENTS

- A. Carpet tile to match existing; Shaw; Right Choice Collection; Style: Thats the Ticket; Color: Perfect Fit #88111; verify prior to submittals.
- B. Carpet Tile: All patterned loop texture, manufactured in one color dye lot; conforming to the following criteria:
 - 1. Tile Size: 24 x 24 inch, nominal.
 - 2. Gage: 1/10.
 - 3. Tufted Weight: 18 oz./sq.
 - 4. Yarn: Eco Solution Q@ Nylon.
 - 5. Dye Method: Solution Dyed.
 - 6. Construction: Textured Loop.
 - 7. Pattern Repeat: None.
 - 8. Secondary Backing: EcoWorx@.
 - 9. Special Treatments: SSP@ Shaw soil protection.
 - 10. Flammability: Class 1.
 - 11. Smoke: Less than 450 flaming.
 - 12. Static Generation: Less than 3.5 kv.
 - 13. Warranties: Manufacturer's limited lifetime warranties.

2.03 ACCESSORIES

- A. Sub-Floor Filler: Cementitious Type recommended by flooring material manufacturer.
- B. Moldings and Edge Strips: Rubber; profiles and colors as selected.
- C. Contact Adhesive: Recommended by carpet manufacturer.

PART 3 EXECUTION

3.01 SALVAGE EXISTING TILE

- A. Contractor shall remove carpet tile indicated on Drawings for salvage or for reinstallation. Store as recommended by manufacturer. Protect tiles from damage and soiling.

3.02 EXAMINATION

- A. Follow Section 01700 - Execution Requirements: Coordination and project conditions.
- B. Verify floor surfaces are smooth and flat within tolerances and are ready to receive work.

3.03 PREPARATION

- A. Remove all demolished flooring adhesive and prepare floor slab for reinstalled and new carpet tile installation.
- B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.
- C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.
- D. Clean substrate.

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3.04 INSTALLATION

- A. Install carpet tile in accordance with CRI 104 and manufacturer's instructions.
- B. Do not mix carpet from different cartons unless from same dye lot.
- C. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- D. Install carpet tile in selected pattern, with pile direction parallel or alternating to next unit, set parallel to building lines; as directed during pre-installation meeting.
- E. Locate change of color or pattern between rooms under door centerline.
- F. Fully adhere carpet tile to substrate.
- G. Trim carpet tile neatly at walls and around interruptions.
- H. Complete installation of edge strips, concealing exposed edges.

3.05 CLEANING

- A. Follow Section 01700 - Execution Requirements: Final cleaning.
- B. Remove excess adhesive from floor, base, and wall surfaces without damage.
- C. Clean and vacuum new carpet surfaces at Substantial Completion.
- D. Contractor shall steam clean existing carpet tile left in place in existing rooms at Substantial Completion.

END OF SECTION

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SECTION 09720

WALL COVERING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation and prime painting.
- B. Wall covering.

1.02 RELATED REQUIREMENTS

- A. Section 09260 - Gypsum Board Assemblies: Wall finishes.
- B. Section 09900 - Paints and Coatings: Preparation and priming of substrate surfaces.

1.03 REFERENCE STANDARDS

- A. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2010.

1.04 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on wall covering and adhesive.
- C. Samples: Submit two samples of wall covering, in size illustrating color, finish, and texture, for style and color verification.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Maintenance Data: Submit data on cleaning, touch-up, and repair of covered surfaces.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the type of work specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. *Inspect roll materials at arrival on site, to verify acceptability.*
- B. Protect packaged adhesive from temperature cycling.
- C. Do not store roll goods on end.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the adhesive or wall covering product manufacturer.
- B. Maintain these conditions 24 hours before, during, and after installation of adhesive and wall covering.
- C. Provide lighting level of 80 ft candles measured mid-height at substrate surfaces.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Acceptable Manufacturers:
 - 1. Omnova Solutions Inc: www.omnova.com.
 - 2. Koroseal/RJF International: www.koroseal.com.

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3. MDC Wallcoverings: www.mdcwall.com.
4. Substitutions: See Section 01600 - Product Requirements.

2.02 MATERIALS

- A. Requirements for All Wall Coverings:
 1. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E 84.
- B. Wall Covering: Vinyl coated fabric; roll stock, conforming to the following:
 1. Textured, patterned wall covering to match colors installed in existing rooms. Match existing.
 2. Owner has maintenance stock material in project area for inspection prior to bidding. Contractor to verify materials and colors prior to bidding. Owner stock shall not be used.
- C. Adhesive: Type recommended by wall covering manufacturer to suit application to substrate.
- D. Substrate Filler: As recommended by adhesive and wall covering manufacturers; compatible with substrate.
- E. Substrate Primer and Sealer: Alkyd enamel type.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are prime painted and ready to receive work, and conform to requirements of the wall covering manufacturer.
- B. Measure moisture content of surfaces using an electronic moisture meter. Do not apply wall coverings if moisture content of substrate exceeds level recommended by wall covering manufacturer.
- C. Verify flatness tolerance of surfaces does not vary more than 1/8 inch in 10 feet nor vary at a rate greater than 1/16 inch/ft.

3.02 PREPARATION

- A. Fill cracks in substrate and smooth irregularities with filler; sand smooth.
- B. Wash impervious surfaces with tetra-sodium or tri-sodium phosphate, rinse and neutralize; wipe dry.
- C. Surface Appurtenances: Remove or mask electrical plates, hardware, fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- D. Surfaces: Correct defects and clean surfaces that affect work of this section. Remove existing coatings that exhibit loose surface defects.
- E. Marks: Seal with shellac those that may bleed through surface finishes.
- F. Apply one coat of primer sealer to substrate surfaces. Allow to dry. Lightly sand smooth.
- G. Vacuum clean surfaces free of loose particles.

3.03 INSTALLATION

- A. Apply adhesive and wall covering in accordance with manufacturer's instructions.
- B. Use wall covering in roll number sequence.
 1. Use only new material. Existing Owner stock shall not be used.
- C. Razor trim edges on flat work table. Do not razor cut on gypsum board surfaces.

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- D. Apply wall covering smooth, without wrinkles, gaps or overlaps. Eliminate air pockets and ensure full bond to substrate surface. Butt edges tightly, with hairline joints.
- E. Horizontal seams are not acceptable.
- F. Do not seam within 2 inches of internal corners or within 6 inches of external corners.
- G. Install wall covering before installation of cabinets and items attached to or spaced slightly from wall surface.
- H. Do not install wall covering more than 1/4 inch below top of wall base.
- I. Remove excess adhesive while wet from seam before proceeding to next wall covering sheet. Wipe clean with dry cloth.

3.04 CLEANING

- A. Clean wall coverings of excess adhesive, dust, dirt, and other contaminants.
- B. Reinstall wall plates and accessories removed prior to work of this section.

3.05 PROTECTION

- A. Do not permit construction activities at or near finished wall covering areas.

END OF SECTION

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SECTION 09900

PAINTS AND COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints, stains, and other coatings.
- C. Scope: Finish all interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.

1.02 REFERENCES

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.
- B. ASTM D 16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2003.
- C. ASTM D 4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 1992 (Reapproved 2003).
- D. GreenSeal GS-11 - Paints; 1993.

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on all finishing products, including VOC content.
- C. Manufacturer's Instructions: Indicate special surface preparation procedures.
- D. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum five years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

1.05 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

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1.06 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Provide all paint and coating products from the same manufacturer to the greatest extent possible.
- C. Paints:
 - 1. Basis of Design: Sherwin-Williams.
 - 2. Benjamin Moore & Co: www.benjaminmoore.com.
 - 3. PPG Architectural Finishes, Inc: www.ppgaf.com.
- D. Substitutions: See Section 01600 - Product Requirements.

2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
 - 1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
 - 4. Supply each coating material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Chemical Content: The following compounds are prohibited:
 - 1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
 - 2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.
- D. Flammability: Comply with applicable code for surface burning characteristics.
- E. Colors:
 - 1. Allow for minimum of four colors for each system, unless otherwise indicated, without additional cost to Owner.
 - 2. Extend colors to surface edges; colors may change at any edge as directed by Architect.

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3. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

2.03 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Owner's representative of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing coatings that exhibit surface defects.
- D. Remove surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. *Gypsum Board Surfaces to be Painted: Fill minor defects with filler compound. Spot prime defects after repair.*
- H. *Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.*
- I. Doors: Prime door top and bottom edge surfaces.
- J. Remove loose, cracked or flaky existing paint finishes. Sand or fill and float as required to provide a smooth, sound substrate for the new paint finish and texture.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

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- D. Apply each coat to uniform appearance.
- E. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- F. Sand wood and metal surfaces lightly between coats to achieve required finish.
- G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 PAINTING SCHEDULE NOTES

- A. Items above finish ceilings, in chases and similar concealed locations shall not be field painted.
- B. Items imbedded in or on floor surfaces, subject to foot or vehicular traffic shall not be painted, unless indicated otherwise.
- C. Seal top and bottom door edges of all wood doors with tinted sealer. Provide two coats of sealer.
- D. All miscellaneous items in finished interior spaces shall be field painted in addition to factory-applied prime coat or finish coat, unless specified to be pre-finished in their respective section.
- E. Replace identification markings on mechanical or electrical equipment when painted accidentally.
- F. Replace electrical cover plates, hardware, light fixture trim, and fittings removed prior to finishing.

3.05 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Refer to Mechanical and Electrical Sections for schedule of color coding of equipment, duct work, piping, and conduit.
- B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- C. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
- D. Paint interior surfaces of air ducts visible through grilles and louvers with one coat of flat black paint to visible surfaces. Paint dampers exposed behind louvers, grilles, to match face panels.

3.06 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.07 PROTECTION

- A. Protect finished coatings until completion of project.
- B. Touch-up damaged coatings after Substantial Completion.

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3.08 SCHEDULE - INTERIOR SURFACES

- A. Existing Painted Metal and Wood Surfaces (Frames, Doors, Trim, etc.) (Semi-Gloss Finish):
 - 1. 1st Coat: S-W PrepRite Bonding Primer, B51W50
 - 2. 2nd/3rd Coats: S-W Pro Industrial O VOC Acrylic, B66
(4 mils wet, 1.7 mils dry per coat)

- B. Wood - Painted (Semi-Gloss Finish):
 - 1. 1st Coat: S-W PrepRite Wall & Wood Oil Primer/Undercoater, B49
(4 mils wet, 2 mils dry)
 - 2. 2nd/3rd Coats: S-W Pro Industrial O VOC Acrylic, B66
(4 mils wet, 1.7 mils dry per coat)

- C. Steel - Shop Primed (Semi-Gloss Finish):
 - 1. 1st Coat: Touch-up shop primer
 - 2. 2nd/ 3rd Coat: S-W Pro Industrial O VOC Acrylic, B66
(4 mils wet, 1.7 mils dry per coat)

- D. Gypsum Board Walls (Satin Finish):
 - 1. 1st Coat: S-W PrepRite High Build Interior Latex Primer, B28
(4 mils wet, 0.8 mils dry)
 - 2. 2nd/3rd Coats: S-W Pro Industrial O VOC Acrylic, B66
(4 mils wet, 1.4 mils dry per coat)

- E. Wood-Stained (To Match Existing):
 - 1. 1st Coat: S-W Sher-Wood BAC Wiping Stain
 - 2. 2nd/3rd Coats: S-W Wood Classics Fast Dry Varnish Hand Rubbed Satin Clear

END OF SECTION